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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

FOX, D

ART UNIT

PAPER NUMBER

1638

DATE MAILED:

07/05/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/490,666

Applicant(s)

Mohr

Examiner

FOX

Group Art Unit

1638

--The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address--

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-49 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-49 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2
- ☐ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

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Claims 1, 6, 21, 25, 37 and 40 are objected to for their inclusion of blank lines. It is understood that the blanks will be replaced with the deposit accession number.

The application should be reviewed for errors. Errors appear, for example, in claim 37, part (a), where a comma should be inserted after "PH48V"; and in claim 47, line 1, where "plants" should be replaced with --plant--.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 5, 14-16, 19-20, 22, 24, 33-35, 37-39, 41, 43, 45-46 and 48-49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3 and 22 are indefinite in their recitation of "wherein said plant is male sterile", since the claims from which they depend are drawn to plants which are not male sterile. If Applicant intended to claim a plant derived from the plant of the preceding claim, further comprising a genetic factor for male sterility, then the claims should be so amended. New matter should be avoided.

Claims 5 and 24 are indefinite in their recitation of "the...protoplasts" which lacks antecedent basis in the preceding claims. The claims should be amended to delete "the" before "cells" and to insert --of the tissue culture-- after "protoplasts".

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Claims 14, 33, 41 and 45-46 are indefinite in their recitation of “high”, “strong”, “above average” and “tall” which are unduly narrative, and which do not clearly set forth the claimed characteristics or the degree of their expression.

Claims 15 and 34 are indefinite in their recitation of “include”, as it is unclear whether this is an open or closed term. Furthermore, the claims are indefinite for failing to positively recite essential method steps, in their mere recitation of “obtaining” in the body of the claim.

Claims 16 and 35 are indefinite in their recitation of “The maize breeding program of claim 15 [or 34]”, since the preceding claims were drawn to a method rather than a breeding program.

Claims 19-20 and 48-49 are indefinite in their recitation of “The single gene conversion(s) of claim 18 [or 47]” since the preceding claims were drawn to maize plants rather than single gene conversions.

Claims 37-39 are indefinite in their recitation of steps (c) and (e). The process step in part (c) of “identifying said inbred plants” is both vague and indefinite in failing to set the metes and bounds of the invention. It is noted that a hybrid plant comprises at least two parents and, in the claimed invention, must comprise at least PH48V as one parent. The method steps do not teach or identify how the person having skill in the art would identify PH48V from the other parent(s) of the hybrid and as such fail to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Furthermore, the steps of identifying the plants with decreased vigor and identifying plants with homozygous genotypes fails to distinguish the parent, which is not PH48V. Additionally noted is the limitation in part (e) “in a manner which preserves

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the homozygosity of said inbred..." which fails to set the metes and bounds of the claimed invention, or to provide a positive method step to meet the requirement to preserve the homozygosity of the plant. Amending claim 37 to recite a positive method step, such as selfing to preserve homozygosity or further limitation to the degree of homozygosity, would serve to obviate this portion of the rejection.

Claim 43 is indefinite in its recitation of "further derived maize plant" as it is unclear whether additional breeding steps besides those of claim 42 were included in the derivation of the "further derived" plant.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14, 17, 33, 36, and 46 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Arthur (U.S. Patent 5,723,739).

Arthur teaches a maize inbred with high resistance to Northern Leaf Blight, high yield, and strong staygreen (see, e.g., column 6, lines 7-14; column 7, lines 1-6). The maize plant taught by Arthur differs from the claimed maize plants only in their derivation from PH48V. However, the mere inclusion of PH48V in the pedigree of the claimed plants would not distinguish them from the prior art plants, particularly since the number of other parents, crosses or generations is not specified in the claims, wherein increasing the number of each parameter would result in a

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decrease in PH48V-derived genes. See *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985), which teaches that a product-by-process claim may be properly rejectable over prior art teaching the same product produced by a different process, if the process of making the product fails to distinguish the two products.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arthur (U.S. Patent 5,723,739).

Arthur teaches a maize Dent inbred with absent anthocyanin in the brace roots, dark green leaves, no leaf sheath pubescence, light green glumes, light green silks, upright ear, strong staygreen, high yield, and high resistance to Northern Leaf Blight; wherein said inbred was derived by crossing other plants with desirable agronomic characteristics, and also teaches tissue culture and the use of the inbred in hybrid seed production (see, e.g., columns 5-7).

Arthur does not teach a maize plant with slightly curved kernel rows or red cob.

It would have been obvious to one of ordinary skill in the art to utilize the maize inbred taught by Arthur, and to modify that inbred by crossing with other maize plants to incorporate desired agronomic characteristics, as suggested by the reference.

No claim is allowed.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to David T. Fox whose telephone number is (703) 308-0280. The examiner can normally be reached on Monday through Friday from 9:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Hutzell, can be reached on (703) 308-4310. The fax phone number for this Group is (703) 308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

July 2, 2001

DAVID T. FOX
PRIMARY EXAMINER
GROUP 1638

A handwritten signature in cursive script, appearing to read "David T. Fox", written in black ink.